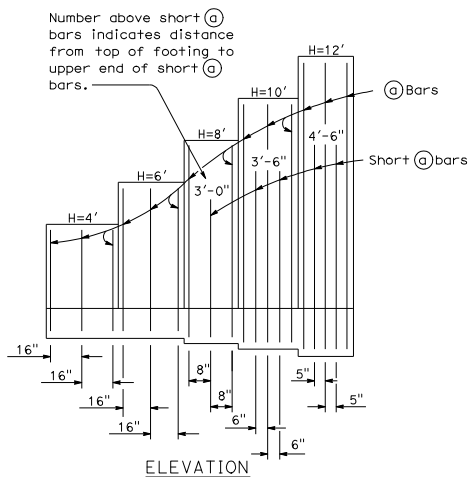


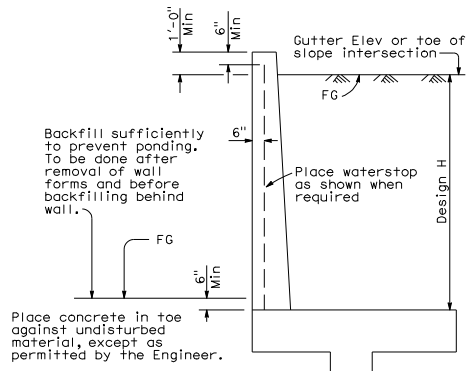
SPREAD FOOTING SECTION

NOTE:

At (a) and Short (a) bars:
 $H \leq 6'$, no splices are allowed within 1'-8" above the top of footing.
 $H > 6'$, no splices are allowed within $H/4$ above the top of footing.

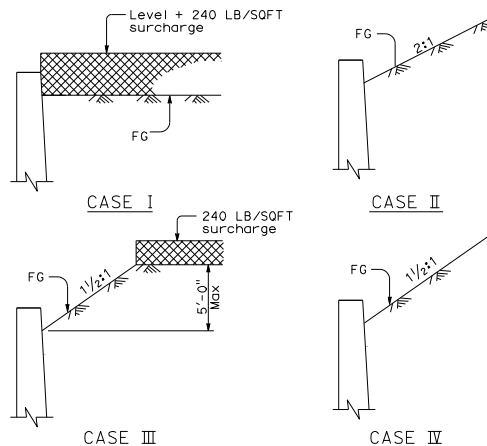


ELEVATION



DESIGN

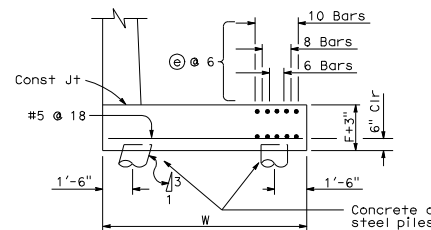
For drainage notes and other details, see B3-8



DETAIL OF DESIGN LOADING CASES

- Case I Level + 240 psf surcharge
- Case II 2:1 Unlimited slope
- Case III 1 1/2:1 Limited slope (5'-0" Max height) + 240 psf surcharge
- Case IV 1 1/2:1 Unlimited slope

TABLE OF REINFORCING STEEL, DIMENSIONS AND DATA					
Design H	4'	6'	8'	10'	12'
W	4'-0"	5'-0"	6'-6"	8'-0"	9'-6"
F Spread Footing	1'-4"	1'-4"	1'-6"	1'-6"	1'-10"
Batter	None	None	None	100:3	100:6
(a) Bars, # @ in	#5 @ 16	#5 @ 16	#5 @ 16	#5 @ 12	#5 @ 10
Short (a) Bars, # @ in	None	None	#5 @ 16	#5 @ 12	#5 @ 10
(b) Bars, # @ in	#5 @ 16	#5 @ 16	#5 @ 8	#5 @ 6	#5 @ 5
Total (e) Bars	8 - #6	8 - #6	10 - #6	8 - #6	6 - #6
Toe Pressure ksf					
Loading Case I	1.7	2.2	2.5	3.0	3.6
Loading Case II	1.6	2.1	2.7	3.4	4.1
Loading Case III	1.7	2.3	2.9	3.9	4.4
Loading Case IV	2.0	3.2	4.2	5.3	6.5



Reinforcement detailed is to be placed in addition to that shown for spread footings.

● For Design H=4' use W=5'-0"
 All others from table.

90 KIP PILE FOOTING SECTION

NOTES:

Design Conditions:

Design H may be exceeded by 6" before going to the next size. Special footing design is required where foundation material is incapable of supporting toe pressure loads listed in table.

Design Data:

$f_c = 1,450$ psi $f'_c = 3,600$ psi $f_s = 24,000$ psi $n = 10$ earth = 120 lb/ft³
 Case I - Wall design for equivalent fluid pressure = 27 and 36 psf/foot.
 Case II, III, IV - Wall design is based on Rankine's formula with $\phi = 33^\circ 42'$.

Max PILE SPACING FOR 90 KIP PILES

Design	Front Row	Back Row
H	1:3 Batter	Vertical
4'	18'-0"	18'-0"
6'	12'-0"	18'-0"
8'	9'-0"	18'-0"
10'	6'-0"	12'-0"
12'	4'-0"	8'-0"

For actual spacing, see Wall Layout.

Pile layout does not apply to Case IV conditions.

DIST	COUNTY	ROUTE	POST MILES	SHEET TOTAL
			TOTAL PROJECT	NO. SHEETS

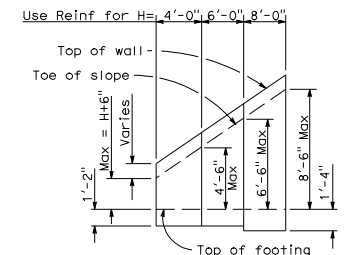
REGISTERED CIVIL ENGINEER

May 1, 2006

PLANS APPROVAL DATE

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TYPICAL LAYOUT EXAMPLE

For joints required, see B0-3/3-3 & B0-3/3-4

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**RETAINING WALL
 TYPE 5**

NO SCALE